

DELAWARE ESTUARY PCB IMPLEMENTATION STRATEGY: APPROACH FOR NPDES PERMITTING

For nearly eight years, with financial and technical backing from EPA and the States bordering the Delaware Estuary, DRBC, the States, EPA Headquarters, EPA Regions 2 and 3 and other stakeholders have worked to develop a uniform, updated numeric water quality criterion for PCBs in the Estuary, corresponding Stage 2 PCB TMDLs, and an overall implementation strategy that will ensure continued PCB loading reductions and ambient water quality improvements. An important component of that overall strategy is an approach for issuing NPDES permits to point sources discharging PCBs to the Estuary. DRBC and the States have reached agreement on the proposed permitting approach set forth below.

PROPOSED NPDES PERMITTING REQUIREMENTS FOR PCB DISCHARGERS

Each NPDES permit for dischargers of PCBs to the Delaware Estuary is proposed to contain:

1. Provisions to ensure that each discharger attains its Stage 2 TMDL wasteload allocation (WLA) as soon as possible:
 - a. A requirement that the permittee develop a Pollutant Minimization Plan (PMP) conforming to the provisions of Section 4.30.9 of the DRBC's *Water Quality Regulations* (WQR). Such a PMP will include among other elements:
 - a set of best management practices (BMPs) intended to achieve “maximum practicable reduction” of PCB loadings to the Estuary; and.
 - a requirement that the permittee submit a PMP Annual Report reporting the success of measures implemented, the PCB loadings reductions achieved, and any revisions to the PMP for the coming year.
 - b. A provision that the Permitting Agency will establish elements of the PMP as enforceable requirements of the permit (e.g., milestones and key actions).
 - c. An Action Level based upon Existing Effluent Quality (EEQ) to ensure that reductions achieved through implementation of a PMP are maintained.
 - If the EEQ Action Level is exceeded, the permittee becomes subject to additional specified monitoring, trackdown and/or BMP requirements to reduce loadings.
 - The EEQ Action Level is re-evaluated prior to every permit renewal on the basis of monitoring data for the previous permit cycle. If the data show a reduction in PCB loadings, EEQ may be reduced. If the data fail to show a reduction by the end of a five-year permit term, the discharger's PMP will be re-evaluated by DRBC and/or the permitting agency and amended to require actions or impose controls designed to achieve further reductions or more aggressive implementation of

BMPs already included in the PMP.

2. Permitting authorities must document in the NPDES permit fact sheets that the implementation of the PMP approach to achieve compliance with the TMDL WLAs is more stringent than the application of a technology based effluent limit for PCBs or other proposed surrogate pollutant (e.g. TSS). The permit must also include the more stringent of any technology based requirements for TSS in compliance with 40 CFR Parts 122.44(a)(1) and 125.3, or the DRBC effluent quality requirements at Section 3.10.4D.1.a.
3. A requirement for monitoring and reporting to calculate effluent concentrations and loadings, using a sensitive sampling and analytical method – Method 1668A or the latest subsequent revision thereof for PCBs in the Estuary.
4. A requirement to submit a revised PMP if the permitting agency determines that the PMP will not likely achieve the maximum practicable reduction of pollutant discharges. This revised PMP would be implemented during the permit cycle to ensure progress in reducing PCB loads.
5. A requirement that the permit holder submit a PMP Progress Report to accompany an updated PMP as part of the 5-year permit renewal application. This report, summarizing progress achieved and any changes made to the PMP over the preceding permit cycle, will supply context to help the permit authority determine the need for additional requirements in the permit renewal.
6. A requirement that monitoring, reporting, PMP requirements, and the EEQ Action Level remain in place until the discharger's wasteload allocation (WLA) is achieved, after which monitoring, reporting and a numeric effluent limit (consistent with the permittee's WLA and the policies of the permitting authority) will apply. Selected PMP action items may be continued to ensure ongoing attainment of the effluent limit.

OTHER PROPOSED ELEMENTS OF THE IMPLEMENTATION STRATEGY AND PERMITTING APPROACH

1. Under the circumstances presented for PCBs in the Delaware Estuary, it is appropriate to adopt an implementation program that allows for the use of adaptive approaches – i.e., approaches entailing the application of a variety of techniques, measurement of their effects, and further application of the most effective techniques in an iterative fashion until the protected use(s) is (are) attained or the program is modified or discontinued. Such an approach both preserves the designated use of fishable waters and ensures it is attained as soon as possible.
2. A staged approach is proposed for Municipal Separate Storm Sewer Systems (MS4s). In the Stage 1 TMDLs, a categorical wasteload allocation (WLA) was assigned to MS4s for each Water Quality Zone (Estuary Zones 2-5). In Stage 2 of the TMDLs, the following approach to MS4s is recommended: (a) for Phase I MS4s, imposition of a

requirement for a PMP and effluent monitoring using Method 1668A; and (b) for Phase II MS4s, formation of a work group comprised of federal and state regulators, to be tasked with (i) developing a procedure for prioritizing individual Phase II MS4 discharges; (ii) identifying the types of requirements that might appropriately be applied to these discharges (e.g., monitoring, system mapping, source identification, etc.); and (iii) determining the type of NPDES permit – individual NPDES permit or General Permit – in which such requirements should be established.

3. DRBC in consultation with the States and EPA Regions 2 and 3 will perform zone-wide and estuary-wide assessments of cumulative changes in ambient and effluent PCB levels periodically (every 5-10 years) to measure cumulative progress and adjust the projected water quality attainment date for PCBs in the Delaware Estuary as set forth in the TMDL.
4. EPA will evaluate the approach no less frequently than every ten years to determine whether the results in its view support continuing, modifying or discontinuing the approach.
5. The proposed permitting approach is appropriate for the Delaware Estuary because an established interstate agency with authority to manage the estuary's water resources will lead implementation of the strategy by working with individual states to establish monitoring protocols and evaluate results of PMP implementation, and by recommending appropriate revisions to the strategy if necessary to achieve reductions in pollutant loadings. Moreover, the approach as applied to implement a Stage 1 TMDL has resulted in significant load reductions to date. Application of the program in other contexts can be limited by the following:
 - (a) candidate pollutants may be limited to those hydrophobic pollutants for which (i) a sediment reservoir is present to attenuate the effect of load reductions on ambient water quality (as is the case with PCBs in the Delaware Estuary), or (ii) treatment technologies to achieve WLAs and LAs are unknown or have not been demonstrated on a large scale (also true for PCBs in the Estuary); and
 - (b) certain factors, including for example one or more of those listed at 40 CFR 131.10(g),¹ preclude attainment of one or more designated uses of the water body and the corresponding water quality criteria for a period of five or more years (also true for PCBs in the Estuary); and

¹ This section of EPA's regulations implementing the Clean Water Act establishes the allowable bases for a state's removal of a designated use or adoption of subcategories of a use. Removal of the use "fish maintenance and migration" is not proposed in the Delaware Estuary, where fishing is an existing use. See 40 CFR § 131.10(h) (providing that a state may not remove a designated use that is an existing use as defined at 40 CFR § 131.3, unless a use requiring more stringent criteria is added.) Instead, the criteria set forth at 40 CFR § 131.10(g) should be among those used as bases for instituting a long-term restoration program where, as in the case of PCBs in the Delaware Estuary, science and data suggest that restoration may be achieved. We note that although the §131.10(g) factors have been used in some contexts as the basis for granting a variance rather than removing a use, no "variance" mechanism is proposed here. Our approach is for instituting a long-term restoration program where as in the case of PCBs in the Delaware Estuary, science and data suggest that restoration may be achieved.

- (c) a TMDL has been established for the pollutant(s) and water body (bodies) to be restored (as has been done for PCBs in the Delaware Estuary); and
- (d) data and/or science indicate that increasingly protective levels of the pollutant(s) can be achieved over time with the implementation of feasible controls, including regulatory and non-regulatory means (as has been demonstrated for PCBs in the Delaware Estuary).

CONCLUSION

We believe this proposed approach is the simplest and most effective path forward to the next phase of permitting for PCBs in the Delaware Estuary, and in turn, to implementation of a comprehensive strategy for restoring the Estuary. Adopting this approach will allow DRBC to proceed with adoption of an updated, uniform PCB criterion, EPA to establish the Stage 2 TMDLs, and co-regulators to advance coordinated non-point source controls, all of which, in combination with permitting, can eventually in our view put fish from the Delaware Estuary back on local menus and among the many features that contribute to the quality of life in our region.